

Super-Penrose process and rotating wormholes

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Abstract

© 2018 American Physical Society. We consider collision of particles in a wormhole near its throat. Particles come from the opposite mouths. If the lapse function is small enough there, the energy E of debris at infinity grows unbounded, so we are faced with the so-called super-Penrose process. This requires the existence of the ergoregion, so a wormhole should be rotating.

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